

Vattenfall

Green Bond Framework

2019-04-24



Contents

1	Introduction.....	3
1.1	Profile Vattenfall Group.....	3
1.2	Vattenfall Group Strategic Direction	3
1.3	Basis of this Green Bond Framework	4
2	Use of Proceeds - categories	4
3	Process for Project Evaluation and Selection	6
4	Management of proceeds	7
5	Reporting.....	7
5.1	Allocation Reporting	7
5.2	Impact Reporting.....	8
6	External review	8
6.1	Second Party Opinion (pre issuance)	8
6.2	Verification (post issuance).....	8
7	APPENDIX.....	8
8	DISCLAIMER	10

1 Introduction

1.1 Profile Vattenfall Group

We are one of Europe's major retailers of electricity and heat and one of the largest producers of electricity and heat. Vattenfall's main markets are Sweden, Germany, The Netherlands, Denmark, the UK, France, Finland, and Norway. The Group has approximately 20 000 employees. The Parent Company, Vattenfall AB, is 100% owned by the Swedish state, and its headquarters are located in Solna, Sweden.

1.2 Vattenfall Group Strategic Direction

Our climate and sustainability objectives, alongside our owner's requirement that we generate a market rate of return, are the basis of our strategy and our strategic targets.

Vattenfall:

- wants to drive the transition towards a fossil free society within one generation
- exists to help all of our customers power their lives in ever climate smarter ways and live free from fossil fuel within one generation
- wants to be a dedicated partner to our customers and society at large, providing convenient and innovative energy solutions
- wants to be a leader in sustainable production, ensuring reliable and cost-efficient energy supply.

To fulfil our purpose – to "Power Climate Smarter Living"¹ – our overarching strategy for the years ahead is based on four strategic objectives:

- Leading towards Sustainable Consumption
- Leading towards Sustainable Production
- High Performing Operations
- Empowered and Engaged People

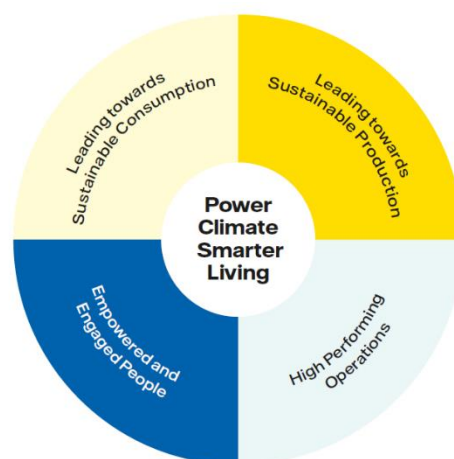
Leading towards sustainable consumption means that Vattenfall focuses on increasing customer centricity, building a sizeable position in decentralised energy and promoting electrification and a climate smart society.

Leading towards sustainable production means a focus on growing in renewables and implementing our CO₂ roadmap to make fossil free living possible within one generation.

Vattenfall's success is in our own hands - in our ability to serve customers, capture new business opportunities and increase the efficiency – things we really can influence.

Vattenfall's activities contribute to the achievement of the UN's Sustainable Development Goals (SDGs), which are a collection of 17 global goals that were adopted in 2015 by more than 150 countries. Though adopted by governments, our strong belief is that businesses and industries play a decisive role in the extent to which these goals are achieved.

In 2016, we identified six SDGs that are the most relevant for Vattenfall and where we can have the greatest global impact, these goals remain valid internally and for our stakeholders, and they are



¹ See: <https://group.vattenfall.com/who-we-are/about-us/our-goals-and-strategy>

reflected in our strategy. These goals are: 7 – Affordable and clean energy, 9 – Industry, innovation and infrastructure, 11 – Sustainable cities and communities, 12 – Sustainable consumption and production, 13 – Climate action, and 17 – Partnership for the goals Vattenfall also contributes to many other SDGs, including those in support of human rights, both at a local level and indirectly through our supply chain.

Together with our partners we are taking responsibility for finding new, sustainable and innovative ways to power the lives of our customers and electrify the transport sector, core industrial manufacturing processes, heating and cooling, to reduce or eliminate the use of fossil fuels in society. As a natural consequence of the Group Strategic Direction, Vattenfall opens up to investors who want to finance the transformation to a sustainable energy system through Vattenfall Green Bonds.

1.3 Basis of this Green Bond Framework

The ICMA Green Bond Principles are a set of voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuing a green bond. The Vattenfall Green Bond Framework follows the ICMA Green Bond Principles issued in 2018, which provides guidelines in four key areas:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting

It is Vattenfall's intention to follow best practices in the market as the standards develop.

2 Use of Proceeds - categories

Vattenfall intends to allocate an amount at least equal to the incremental net proceeds of Vattenfall Green Bonds to a portfolio of Eligible Green Projects in the following eligible categories:

a) Renewable energy and related infrastructure

- Wind energy
- Solar energy
- Biomass
- Geothermal
- Hydrogen

b) Energy efficiency

- Hydro power
- Smart grids/meters
- Fossil free district heating and district cooling
- Energy recovery

c) Electrification of transport and electrification of heating

- Infrastructure for electric vehicles
- Power to Heat

d) Industry projects

- Activities enabling the transformation to fossil free² production like the HYBRIT³ project

Vattenfall will not finance nuclear or fossil fuel based production projects with the proceeds of the Green Bonds.

² Fossil free: not depending on fossil fuels for its own operations (e.g. for Vattenfall no fossil fuels for energy generation and no fossil products to customers)

³ See <http://www.hybritdevelopment.com/>

3 Process for Project Evaluation and Selection

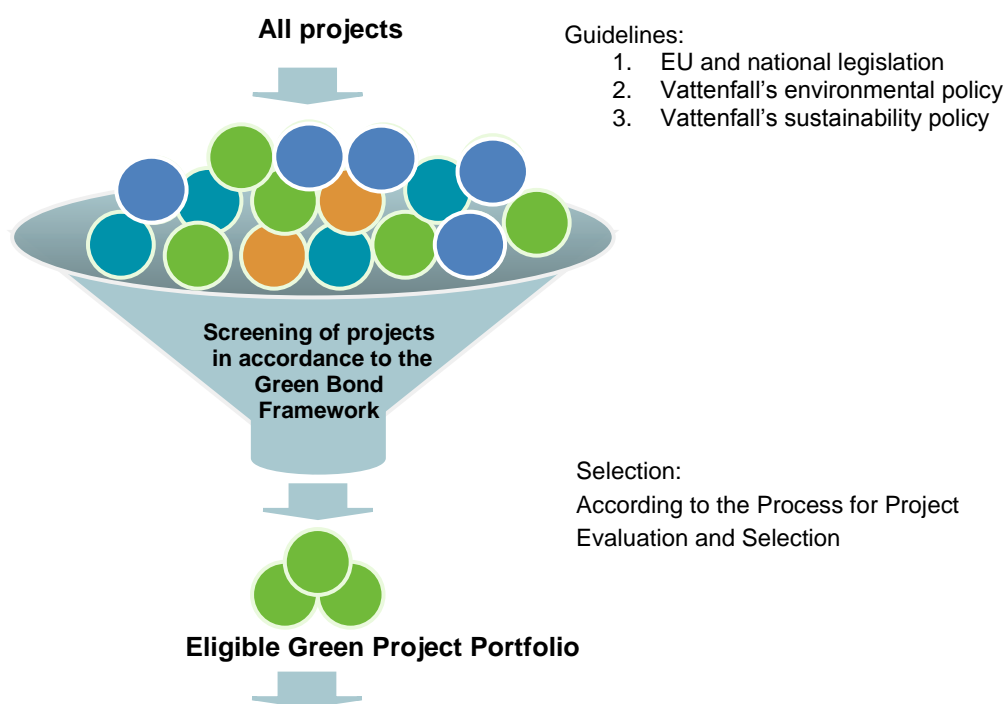
Projects financed and/or refinanced through the Green Bond proceeds are evaluated and selected by Vattenfall's Green Bond Committee that is formed by representatives from units responsible for:

- Treasury
- Sustainability
- Strategy
- Investor Relations

and other parties to be nominated as subject matter experts, like Environment, Business Development, Research & Development, Communications etc.

Minutes are taken at the Green Bond Committee meetings. Final approvals of projects are taken in consensus by the Green Bond Committee.

Green Bond Project Selection Process Flowchart



Vattenfall applies minimum environmental and social (ESG) requirements and all applicable EU as well as national environmental and social regulation for all its activities, including those financed with the proceeds of the Green Bond. Vattenfall policies can be found on [vattenfall.com](https://corporate.vattenfall.com/)⁴.

⁴ <https://corporate.vattenfall.com/>

4 Management of proceeds

An amount equal to the net proceeds of the issue of the Green Bonds will be credited to a separate account that will support Vattenfall's funding of Eligible Green Projects.

Vattenfall intends to allocate the proceeds from the Green Bonds to the financing of an Eligible Green Project Portfolio, selected in accordance with the use of proceeds criteria and evaluation and selection process presented above. These projects can be new build projects, existing projects and refurbishments.

Vattenfall intends to designate sufficient eligible projects in the Eligible Green Project Portfolio to provide that the total balance of green investments and expenditures always exceeds the total balance of all outstanding Green Bonds.

For each new Green Bond issuance, where necessary, additional Eligible Green Projects will be added to this Eligible Green Project Portfolio to ensure sufficient and timely allocation of the incremental net proceeds. During the life of the Green Bonds, if a project ceases to fulfil the eligibility criteria, Vattenfall will on a best effort basis remove the project from the Eligible Green Project Portfolio and replace it when necessary for the balance as soon as reasonably practicable.

Until disbursement to Eligible Green Projects, the balance on the separate account will be placed in the liquidity reserves and managed accordingly.

Vattenfall ensures that the systems and processes as specified above meet their requirements over the lifetime of all Green Bonds and other potential green funding.

5 Reporting

The Green Bond Principles require green bond issuers to provide information on the allocation of proceeds. The reporting shall include a list of the projects to which Green Bond proceeds have been allocated, a brief description of the projects and the amounts allocated and their expected impact.

Vattenfall will align, on a best effort basis, the reporting to the Nordic Public Sector Issuers' Position Paper on Green Bonds Impact Reporting⁵. The reporting basis for all Vattenfall Green Bonds and other potential green funding is the Eligible Green Project Portfolio and will be aggregated for all Vattenfall Green Bonds and other potential green funding outstanding.

5.1 Allocation Reporting

Vattenfall intends to report substantial changes yearly of the allocation to the Eligible Green Project Portfolio at least at the category level.

To the extent practicable, Vattenfall will provide

- A list of projects included in the Eligible Green Project Portfolio and their expected impact

⁵ See <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Resource-Centre/NPSIPositionpaper2019final-120219.pdf>

- The amounts per category invested in the Eligible Green Projects
- A qualitative description of key projects
- The proportion of new projects, existing projects, divested assets (earlier funded by Green Bonds), and refurbishments
- The balance of unallocated cash and/or cash equivalents.

5.2 Impact Reporting

Where feasible, Vattenfall may report on the impacts of the Eligible Green Project Portfolio funded with the Green Bond proceeds, or refer to existing sustainability reporting. A list of potential impact reporting indicators is included in the Appendix.

The investor report will be made publicly available on Vattenfall's website.

6 External review

6.1 Second Party Opinion (pre issuance)

This Vattenfall Green Bond Framework will be reviewed by Cicero who will issue a Second Party Opinion. The Second Party Opinion as well as the Green Bond Framework will be made available to the Green Bond investors and to other stakeholders on Vattenfall's website.

6.2 Verification (post issuance)

Vattenfall intends to include, in its yearly Annual and Sustainability Report, a verification by its external auditor (EY or any subsequent external auditor) of a management statement on the allocation of the Green Bond proceeds to the Eligible Green Project Portfolio.

7 APPENDIX

TABLE OF POTENTIAL IMPACT INDICATORS

The list of sample eligible investments, expenditures and/or projects and initially estimated potential impact of the Green Bond issuance.

Appendix - Supports to UN’s Agenda 2030 – The 17 Sustainable Development Goals

Category	Eligible project types	Potential impact indicators	13 Climate Action	7 Affordable and Clean Energy	9 Industry, Innovation, and Infrastructure	12 Responsible Consumption and Production	11 Sustainable Cities and Communities	17 Partnership for the Goals
Renewable energy and related infrastructure	<ol style="list-style-type: none"> 1. Wind energy 2. Solar energy 3. Biomass 4. Geothermal 5. Hydrogen 	<ul style="list-style-type: none"> - Installed capacity of Renewable production (MW) - Production of Renewable electricity / heat (MWh) - CO2 emissions avoided (tonnes) Per euro invested		X	X	X		X
Energy efficiency	<ol style="list-style-type: none"> 1. Smart grids 2. Fossil free district heating / cooling 3. Hydro 	<ul style="list-style-type: none"> - Number of smart meters - Number of customers - Energy savings (in kWh and/or per cent) - CO2 emissions avoided (tonnes) Per euro invested		X	X	X	X	X
Electrification of transport and electrification of heating	<ol style="list-style-type: none"> 1. Investments in infrastructure for electrical vehicles 	<ul style="list-style-type: none"> - Number of charging points installed Per euro invested	X		X	X	X	X
Industry projects	<ol style="list-style-type: none"> 1. Transformation to fossil free production 	<ul style="list-style-type: none"> - CO2 emissions avoided (tonnes) Per euro invested	X		X	X		X

8 DISCLAIMER

THIS DOCUMENT IS INTENDED TO PROVIDE NON-EXHAUSTIVE, GENERAL INFORMATION. THIS DOCUMENT MAY CONTAIN OR INCORPORATE BY REFERENCE PUBLIC INFORMATION NOT SEPARATELY REVIEWED, APPROVED OR ENDORSED BY VATTENFALL AND ACCORDINGLY, NO REPRESENTATION, WARRANTY OR UNDERTAKING, EXPRESS OR IMPLIED, IS MADE AND NO RESPONSIBILITY OR LIABILITY IS ACCEPTED BY VATTENFALL AS TO THE FAIRNESS, ACCURACY, REASONABLENESS OR COMPLETENESS OF SUCH INFORMATION.

THIS DOCUMENT MAY CONTAIN STATEMENTS ABOUT FUTURE EVENTS AND EXPECTATIONS THAT ARE FORWARD LOOKING STATEMENTS. NONE OF THE FUTURE PROJECTIONS, EXPECTATIONS, ESTIMATES OR PROSPECTS IN THIS DOCUMENT SHOULD BE TAKEN AS FORECASTS OR PROMISES NOR SHOULD THEY BE TAKEN AS IMPLYING ANY INDICATION, ASSURANCE OR GUARANTEE THAT THE ASSUMPTIONS ON WHICH SUCH FUTURE PROJECTIONS, EXPECTATIONS, ESTIMATES OR PROSPECTS HAVE BEEN PREPARED ARE CORRECT OR EXHAUSTIVE OR, IN THE CASE OF THE ASSUMPTIONS, FULLY STATED IN THE DOCUMENT. VATTENFALL HAS AND UNDERTAKES NO OBLIGATION TO UPDATE, MODIFY OR AMEND THIS DOCUMENT, THE STATEMENTS CONTAINED HEREIN TO REFLECT ACTUAL CHANGES IN ASSUMPTIONS OR CHANGES IN FACTORS AFFECTING THESE STATEMENTS OR TO OTHERWISE NOTIFY ANY ADDRESSEE IF ANY INFORMATION, OPINION, PROJECTION, FORECAST OR ESTIMATE SET FORTH HEREIN CHANGES OR SUBSEQUENTLY BECOMES INACCURATE.

THIS DOCUMENT IS NOT INTENDED TO BE AND SHOULD NOT BE CONSTRUED AS PROVIDING LEGAL OR FINANCIAL ADVICE. IT DOES NOT CONSTITUTE AN OFFER OR INVITATION TO SELL OR ANY SOLICITATION OF ANY OFFER TO SUBSCRIBE FOR OR PURCHASE OR A RECOMMENDATION REGARDING ANY SECURITIES, NOTHING CONTAINED HEREIN SHALL FORM THE BASIS OF ANY CONTRACT OR COMMITMENT WHATSOEVER AND IT HAS NOT BEEN APPROVED BY ANY SECURITY REGULATORY AUTHORITY.

THE DISTRIBUTION OF THIS DOCUMENT AND OF THE INFORMATION IT CONTAINS MAY BE SUBJECT OF LEGAL RESTRICTIONS IN SOME COUNTRIES. PERSONS WHO MIGHT COME INTO POSSESSION OF IT MUST INQUIRE AS TO THE EXISTENCE OF SUCH RESTRICTIONS AND COMPLY WITH THEM.

THE INFORMATION IN THIS DOCUMENT HAS NOT BEEN INDEPENDENTLY VERIFIED.

THE ADDRESSEE IS SOLELY LIABLE FOR ANY USE OF THE INFORMATION CONTAINED HEREIN AND VATTENFALL SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGES, DIRECT, INDIRECT OR OTHERWISE, ARISING FROM THE USE OF THIS DOCUMENT BY THE ADDRESSEE.